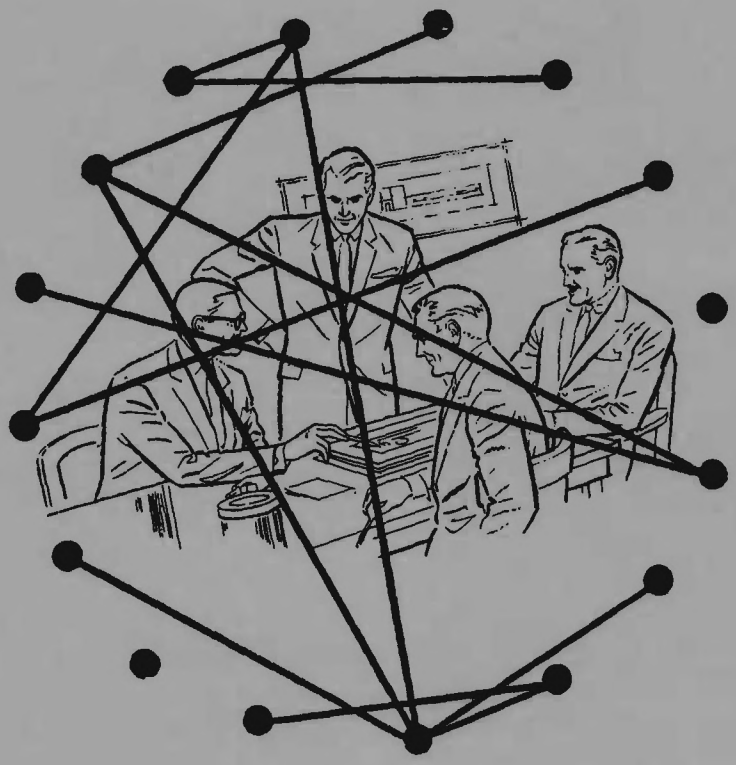
B-526

Project B–526

USDC P. O. No. NP8AD246

A PRODUCTIVITY OVERSIGHT PROGRAM FOR THE APPAREL INDUSTRY: A REGIONAL MODEL



By
Robert E. Collier

Final Report

GEORGIA INSTITUTE OF TECHNOLOGY

Engineering Experiment Station

Atlanta, Georgia 30332

1979

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A PRODUCTIVITY OVERSIGHT PROGRAM FOR THE APPAREL INDUSTRY: A REGIONAL MODEL

Final Report

by

Robert E. Collier
Senior Research Scientist
and
Project Director

This report was prepared for the U. S. Department of Commerce in fulfillment of P. O. No. NP8AD246. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the grantee and do not necessarily reflect the views of the U. S. Department of Commerce.

GEORGIA INSTITUTE OF TECHNOLOGY
Engineering Experiment Station
Technology and Development Laboratory
April 1979

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Summary

The purpose of this report is to furnish the U. S. Department of Commerce a plan for the development of a prototype productivity program that will focus attention of industry, labor, government, and special interest groups on managing the changes that may be required to improve productivity in the apparel industry, thus making it more competitive in the marketplace. A secondary objective of this report is to provide an underlying rationale which supports the need for productivity improvement in the apparel industry in a broad context.

The apparel industry is highly competitive, with a large number of small firms with minimal price flexibility, low entry barriers, and profit rates which reflect the absence of monopoly power. The industry is of special importance to national economic policy because it employs a large number of minority workers and women. Also, it is a prime example of the more competitive segment of the U. S. economy. Further, apparel commodities are a major component of consumer expenditures, and thus price and cost developments in this industry have a direct impact on consumers.

The concept on which the proposed program is based is one that provides for the sharing of knowledge and resources in a way that is useful and profitable to all organizations, yet maintains organizational autonomy and proprietary integrity. The concept as formalized in the model envisions exchanges carried out by program participants on a voluntary basis, on neutral ground, in a nonthreatening environment.

The productivity oversight concept is designed to involve region-wide industry in a phased program that will bring together public and private leaders in a voluntary networking process viewing the industry and its productivity problems in an "oversight" fashion. It seeks program accomplishment thorough voluntary processes rather than through an authoritative, government-dominated process.

Results of this project confirm the need for some type of comprehensive mechanism that can be used by the government to foster the establishment of regional productivity councils. The model produced by the project offers an

approach to developing and implementing a comprehensive productivity improvement program. It is recommended that the Department of Commerce sponsor the further development, testing, and evaluation of the application of the model in a real-world setting.

A PRODUCTIVITY OVERSIGHT PROGRAM FOR THE APPAREL INDUSTRY: A REGIONAL MODEL

> ...What we need, therefore, is a partnership - between business, labor, and Government - to sponsor and undertake a national and regional program of productivity improvement.
>
> Jacob K. Javits, February 6, 1979

Purpose

The purpose of this report is to furnish the U. S. Department of Commerce a prototype plan for the development of a productivity program that will focus the attention of industry, labor, government, and special interest groups on managing the changes that may be required to make the apparel industry more competitive in the marketplace through improved productivity practices. A secondary objective of this report is to provide an underlying rationale which supports the need for improved productivity in the apparel industry in a broad context.

As required by Purchase Order No. NP8AD246, as amended, this report also is concerned with opportunities for productivity improvement in the apparel industry, the identification of local sources of technical assistance for productivity improvement, and regional relationships to broader U. S. apparel productivity initiatives.

Apparel Industry Characterization

The apparel industry is highly competitive, with a large number of small firms with minimal price discretion, low entry barriers, and profit rates which reflect the absence of monopoly power. The industry is of special importance to national economic policy because it employs a large number of women and minority workers. Also, it is a prime example of the more competitive segment of the U. S. economy. Further, apparel commodities are a major component of consumer expenditures, and thus price and cost developments in this industry have a direct impact on consumers.[1/]

Industry Structure, Conduct, and Performance. The fabrication of apparel products is preceded by three major stages of production: (1) fiber preparation and yarn spinning; (2) weaving, knitting, or braiding into "gray" fabrics; and (3) fabric finishing. The fabricating aspect of apparel production is classified as Apparel and Other Products (SIC 23).

Although some technological advancements have taken place in the apparel industry, it is likely to continue to be one of the most labor intensive of all manufacturing industries. The two most important reasons for this situation are: (1) short, nonstandard runs are common in the industry, and (2) large capital outlays are needed for advanced equipment. Thus, it appears that significant technical advances in the apparel industry can be made only in the larger apparel firms which have capital resources available for manufacturing improvements. Some opportunities for major technological advances appear to be (1) laser cutting, (2) numerically controlled cutting devices, and (3) automatic contour seamers, profile stitching machines, and numerically controlled sewing machines.

Available data indicate that economies of scale barriers are practically nonexistent in the apparel industry. Relatively speaking, the product differentiation barrier in the apparel industry is low, as is the capital requirements barrier. However, fragmented production, the nondifferentiability of products, the relative ease of entry, and a large import market have been important factors in holding down apparel industry profit rates.[2/]

Employment and Wage Trends. Studies indicate that the apparel industry is declining in importance as a source of employment. Employment in the apparel industry reached its peak in 1969. Women account for a higher percentage of employment in the apparel industry than in any other two-digit manufacturing industry. Nearly three-fourths of apparel workers in 1950 were women. By 1970, women held 80.9 percent of apparel jobs. The average wage in the apparel industry was 95 percent of the manufacturing wage in 1947; by 1977 it had declined to 64 percent.

Employment in the apparel industry has moved southward over the post-World War II period. The shift in apparel employment was in part a response to the lower labor costs in the South. However, as late as 1975 there were

still more apparel workers in the Northeast than in the Southeast. Statistical data relating to number of apparel establishments in the eight-state southeastern region, the number of employees, and the value of shipments are shown in the tables of Appendix A. An analysis of these tables reveals that the apparel industry is important in the southeastern section of the country because of the composition of the work force and the importance of these types of jobs to the region. On a national average, the apparel industry alone provides one out of every five manufacturing jobs for women. In the Southeast, which has become industrialized in the last decade or so, the need for jobs for minorities and women is of prime importance.[3/]

Industry Resistance to Change. A study of corporate responses to import competition in the apparel industry indicates that successful and profitable strategies appear possible under intense competitive conditions. "Yet the aggregate historical data show that a large number of firms have lacked the capability or have been unwilling to make the necessary transition that would allow them to survive in an import competitive environment. The challenge for public policy is, therefore, to reach an optimum balance between a set of policies designed to protect domestic industry from the potentially disruptive effects of uncontrolled foreign competition and an alternative program of public assistance that will enhance the abilities of affected firms to react positively to the threat that import competition poses to their survival."[4/]

Summary of Industry Characteristics. In summary, the apparel industry can be characterized in the following terms:

- o The apparel industry is extremely fragmented and highly competitive;
- o The apparel industry is a labor-intensive industry and will probably remain so as long as many firms are involved in apparel production;
- o The industry employs a large number of minority workers and women;
- o The apparel industry provides commodities that are a major component of consumer expenditures, and thus the price and

cost developments of the industry have a very direct impact on consumers;

- o The industry continues to face economic conditions that result in unprofitable operations for many individual firms; and
- o Individual firms continue to seek survival on a profitable basis while maintaining organizational integrity, autonomy, and the protection of proprietary interests.

Threats to the Viability of the U. S. Apparel Industry

"From our nation's early beginning the textile and apparel industries have been important to our economy. In terms of economic development these industries have been as significant as heavy manufacturing and agriculture. They continue to be a major component of our economy today. Together they accounted for $25.5 billion in income payments in 1975, more than the motor vehicle and equipment industry. They employ directly more than three and a half million Americans and account for 11.6 percent of total manufacturing employment. Yet employment in these industries has edged downward slightly over the past decade and hourly earnings are substantially below the all manufacturing averages."[5/]

During the past decade the textile and apparel industries also have experienced a substantial loss of markets to imports, causing widespread alarm throughout the industries. The usual reason given for the rise of U. S. apparel imports is the lower costs of foreign and offshore manufacturers. However, a recent study indicates that successful and profitable strategies appear to be possible under intense foreign competitive conditions. But, recent research also suggests that a large number of firms either have not had the capability or were unwilling to make the necessary changes that would place them in a more competitive position with foreign imports.[6/] Studies also have shown that while it is essential that productivity be maintained and improved, other strategies also must be employed.[7/]

Governmental Involvement in the U. S. Apparel Industry

The U. S. Department of Commerce has developed and fostered a number of assistance programs to help the U. S. apparel industry become more competitive

in the national and world markets. These programs are designed to make the apparel industry stable and profitable, while still maintaining the quality of working life expected in American industry. These initiatives include investigative programs relating to marketing strategies, technology assessment, productivity improvement in the industry, and manufacturing technology. Also, the Economic Development Administration of the Department of Commerce has established regional trade adjustment assistance centers to help eligible trade impacted firms. The several "university centers" sponsored by the Economic Development Administration continue to provide management and technical assistance to eligible firms. This latter program has been in existence for more than ten years.

Under provisions of the 1962 Trade Expansion Act, firms could become eligible for trade adjustment assistance if it was shown that import competition was the major factor in the resulting adverse conditions and could be "related" to trade concessions made by the United States under the Act's provisions. Until the present time, textile and apparel firms, for the most part, have not been fully served by provisions of the foregoing Act. Among the aspects of the Act most often criticized is the lengthy and complex procedure firms have to undertake to obtain assistance. Studies to date indicate that "if adjustment assistance is to be effective it must be not only timely but must also be based on a sound development plan."[8/] The companies most likely to be in need of assistance are the least likely to have access to the competent staff required to design and implement a successful program.

Assuming that the federal government will become further involved in processes and programs designed to revitalize the apparel industry, it seems that there is a need to examine the present delivery system for governmental assistance to industry to determine if there are ways and means for involving interested organizations in productivity program formulation and implementation at the local and regional levels. Such a process or delivery system for productivity improvement should involve leaders from business and industry, trade and labor associations, governmental agencies, and other interested groups.

Productivity Improvement: A National Policy Issue

The term "productivity" seems to be one that individuals define within

their own frame of reference. Productivity concepts also appear to vary among organizations, whether industry, labor, or government.

"Productivity is usually measured in terms of manhours per unit of output. This is done frankly because it is the simplest data to collect. The emphasis on the man in this measure is unfortunate and has led to much confusion."[9/] For the purposes of this proposed program, the term "productivity" relates to measurement of the efficiency with which capital, technology, and labor are utilized. The optimum approach to productivity can vary with time and place.

On February 6, 1979, Senator Jacob K. Javits (R,NY) addressed the Senate on the need for a national productivity policy. In part he stated that "productivity is the Achilles' heel of the current national economic crisis. U. S. productivity--the measure of the efficiency or vitality of our economy--has been stagnant in recent years, and has precipitated and will maintain the new inflationary spiral that threatens to be so destructive in the next decade."[10/] He indicated that "what we need, therefore, is a partnership--between business, labor, and Government--to sponsor and undertake a national and regional program of productivity improvement."[11/]

Senator Javits suggested that the federal government can do much to be a catalyst that marshals business and labor support and participation. "We need to have a national commitment to productivity improvement; the Federal Government should inaugrate--could sponsor the establishment of regional productivity councils--to study regional productivity problems and recommend necessary improvements. Such councils could be the resource centers accessible to local business to help in dealing with unique regional productivity problems."[12/]

Productivity improvement in the apparel industry appears to be a matter of national policy. The nature of the industry makes it very difficult for a "grass roots" approach to be undertaken without national leadership and support. Although technological improvements in the apparel industry may make it more competitive with foreign imports, it appears that industry survival may depend upon national economic policy.

An Oversight Approach to Productivity Improvement

The Environment. The United States does not have a centralized, comprehensive economic plan and program administered by a hierarchy of governmental organizations operating within an authoritative system. Rather, the economic activity of the nation is conducted by a "conglomeration" of governments, public agencies, private enterprises, and advocacy organizations. Few, if any, lines of authority systematically link these organizations together for the orderly accomplishment of economic activity. Also, it appears that the establishment of good and continuing relationships and communication networks among and between organizations is left largely to chance.

Theoretically, it may be desirable to develop an assistance strategy for the apparel industry supporting an open market system that leaves all economic processes to the individual producer and the individual consumer, and leaves competition to enforce this openness. However, it is obvious that we live in an are in which the international market system is neither fully open nor fully competitive. It seems also that governmental forces are playing an increasingly persuasive regulatory role in the marketplace, in national economic planning, and in resource availability.

While acknowledging that the national government has a predominant role to play in the economic well-being of the nation, it is recognized that economic activities actually occur at the local level; for it is here that plants are located, agriculture and business strengthened, and new jobs created or existing jobs saved. Any internal economic strategy must focus at the local and substate levels if all elements of society are to be served. National and state governments cannot solve all individual problems at the local level, but they can assist local businesses, the community, and economic regions in solving their own problems.

The recent history of economic and social change in the United States has demonstrated the need for elements of the private and public sector to work together in a cooperative relationship never before attempted on such a scale. Motivated by local leadership and fostered by various federal agencies, a number of cooperative economic activities have been undertaken;

however, economic activity in the United States continues to be complicated by the diverse nature of its organizational structure and processes.

Increasingly, administrators in the public sector and managers in the private sector of society find that rather than managing organizational resources or managing a unique system, they are managing relationships, facilitating the exchange of information and resources and the development of understanding among diverse components which make up the community or business complex. Increasingly, public and private institutions are being called upon to bridge the gap which exists between these diverse components, to forge new linkages, and to construct and facilitate networks which make it possible for individuals and institutions to draw on each other.[13/]

A Productivity Oversight Concept. The concept on which the proposed program is based, is one that provides for the sharing of knowledge and resources in a way that is useful and profitable to all organizations, yet maintains organizational autonomy and proprietary integrity. The concept as formulated in the model envisions exchanges carried out by program participants on a voluntary basis, on neutral ground, in a nonthreatening environment.

The productivity oversight concept is designed to involve region-wide industry in a phased program that will bring together public and private leaders in a voluntary networking process viewing the industry and its productivity problems in an "oversight" fashion. It seeks program accomplishment through voluntary processes rather than through an authoritative, government-dominated process.

Utilization of In-being Organizations and Capabilities. The oversight approach to productivity improvement envisions the utilization of existing organizations to the maximum extent possible. Where necessary, a consortium-type arrangement can be utilized to fashion oversight activities and to implement actions needed to encourage improvement in productivity.

Figures 1 and 2 of Appendix C show the type and kinds of organizations that could be associated with an apparel industry productivity program. Technical assistance sources currently available to the industry in the southeastern region are listed in Appendix B. It is noted that a relatively high

percent of the organizations listed have some working relationship with the Department of Commerce.

Industry Leader Opinion. A study recently completed by the Georgia Tech Engineering Experiment Station is concerned with regional productivity improvement programs for fragmented manufacturing industries. An objective of the research undertaken by the project was to investigate the feasibility of regional productivity programs which would cooperatively involve a university with fragmented industry in productivity research. The textile and apparel industries were included in the study.

To ensure that any programs recommended for subsequent experimentation would be compatible with regional conditions and regionally perceived needs, input from industry personnel was actively sought. Difficulties perceived with respect to the textile and apparel industries were found to be: the desire on the part of firms to protect proprietary interests, the conflicts between industry needs for fast solutions to problems and university research time constraints, conflicts between university participation and the interest of private consulting firms, and the fear that government funding of projects and programs may mean government control. In addition, the difficulty of maintaining communication between all parties and the variability in processes in the apparel industry were viewed as barriers to joint solutions to industry problems.

Major problems identified in the foregoing study with respect to the apparel industry were characterized as:

- Import competition
- People: turnover, training
- Tax policies
- Textile/apparel interfaces
- Access to newer innovative equipment by smaller firms
- Fusing technology
- Cutting technology

The study also reported that the two major trade associations, the American Textile Manufacturers Association and American Apparel Manufacturers

Association, and their committees were seen by interviewees as primary influences in these industries. Large firms in both sectors and equipment manufacturers also were seen as major industry forces.[14/]

Due to the nature and limited scope of the project funded by P. O. No. NP8AD246, a determination was made with the approval of the Government Technical Representative not to make a major effort to obtain industry leaders' opinions in the apparel industry with respect to the nature of a productivity mechanism until such time as some type of prototype productivity program could be discussed with some assurance of federal sponsorship. However, random interviews were conducted. This interview series laid the foundation for further investigations, should they be undertaken. Generally, the responses to the interviews conducted confirm the existence of known industry problems and the general attitude of company managers towards the nature and operational mode of the apparel industry.

Other Productivity Organizations

As required by the provisions of P. O. No. NP8AD246, communications were established between the contractor and other productivity centers listed in the purchase order. Correspondence to this effect is contained in the Progress Report of March 10, 1979.

A Model Approach for An Apparel Industry Productivity Initiative

As reported above, the primary objective of the project is to provide the Department of Commerce a plan for a "mechanism" that can be utilized to focus on productivity improvement in the apparel industry within the region. The recommended approach is a regional model for a productivity overview program for the apparel industry. The model is presented in detail in Appendix C. It has been designed to provide a prototype that can be further developed and adapted to fit unique regional situations. It provides an approach that, if found to be acceptable after a period of testing and evaluation, can be utilized in regions throughout the country.

Project Recommendation

Results of this project confirm the need for some type of comprehensive mechanism that can be used by the government to foster the establishment of regional productivity councils. The model produced by the project offers an approach to developing and implementing a comprehensive productivity improvement program. It is recommended that the Department of Commerce sponsor the further development, testing, and evaluation of the application of the model in a real-world setting.

Footnotes

1/ Council on Wages and Price Stability, Executive Office of the President, Textile/Apparel, A Study of the Textile and Apparel Industries. Washington: U. S. Government Printing Office, 1978, p. iii.

2/ Ibid., pp. 13-19.

3/ Ibid., pp. 21-51.

4/ Jose de la Torre, et al., Corporate Responses to Import Competition in the U. S. Apparel Industry. Atlanta: Georgia State University, 1978, p. 207.

5/ Council on Wage and Price Stability, op. cit., p. iii.

6/ de la Torre, op. cit., p. 207.

7/ Ibid., p. 215.

8/ Ibid., p. 213.

9/ Manufacturing Productivity Center, Manufacturing Productivity, Vol. 2, No. 9, September 1978, Chicago: Manufacturing Productivity Center, preface.

10/ Jacob K. Javits, Congressional Record, Vol. 125, No. 12, The Need for a National Productivity Improvement Policy, Washington: U. S. Government Printing Office, February 6, 1979, p. 1100.

11/ Loc. cit.

12/ Ibid, p. 1102.

13/ Malcomb E. Shaw, "Education Is Not A Place: Connect Learning With Living," Public Administration Review, November/December 1973, p. 519.

14/ Ester Lee Burks, et al., Regional Productivity Improvement Programs for Fragmented Manufacturing Industries. Atlanta: Georgia Institute of Technology, June 1978, pp. 47-54.

Appendix A

A "SNAPSHOT" OF THE LOCAL APPAREL INDUSTRY IN THE SOUTHEASTERN REGION

These tables represent a detailed snapshot of the local (eight-state Southeast) apparel industry. Additional data are necessary for productivity analysis. However, these data are presented to gain insight into the industry before lengthy and detailed study is undertaken.

The apparel industry is highly labor-intensive. About 86 percent of the labor force are production workers, compared with 72 percent in all manufacturing. Women make up about 81 percent of the work force, the highest percentage for any manufacturing industry. It is unique in the opportunities it offers for the unskilled, semi-skilled, and youthful workers, and for minority group members.

Over the years there has been a shift towards concentration into larger firms. The number of plants has declined in all sections of the industry Accordingly, the average employment per plant in the apparel industry has increased in the U. S. from 43 employees in 1960 to 60 employees in 1974.

NUMBER OF ESTABLISHMENTS: 8-STATE SOUTHEAST[1/]

Standard Industrial Classification		1963	1967	1972	1976
2300 to 2389	Apparel	1532	1807	2354	NA
2310					
2311	Men's and Boys' Suits and Coats	39	70	89	
2320		632	722	797	
2321	Men's and Boys' Shirts and Nightwear	243	260	274	
2322	Men's and Boys' Underwear	19	34	39	
2323	Men's and Boys' Neckwear	4	5	16	
2327	Men's and Boys' Separate Trousers	136	166	175	
2328	Men's and Boys' Work Clothing	135	185	202	
2329	Men's and Boys' Clothing, N.E.C.	15	64	82	
2330		441	598	991	
2331	Women's and Misses' Blouses and Waists	73	79	113	
2335	Women's and Misses' Dresses	169	356	592	
2337	Women's and Misses' Suits and Coats	10	33	63	
2339	Women's and Misses' Outerwear, N.E.C.	114	128	220	
2340		135	150	173	
2341	Women's and Children's Underwear	31	120	142	
2342	Brassieres and Allied Garments	11	25	31	
2350		9	20	13	
2351	Millinery				
2352	Hats and Caps, Except Millinery		11	10	
2360		81	131	155	
2361	Children's Dresses and Blouses	31	50	71	
2363	Children's Coats and Suits	5	10	8	
2369	Children's Outerwear, N.E.C.	52	64	69	
2370					
2371	Fur Goods			2	
2380		88	110	119	
2381	Fabric Dress and Work Gloves	13	31	35	
2384	Robes and Dressing Gowns	12	23	18	
2385	Waterproof Outer Garments	8	18	15	
2386	Leather and Sheep Lined Clothing		1	3	
2387	Apparel Belts	5	4	7	
2389	Apparel and Accessories, N.E.C.		10	8	

1/Includes: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

NA - Not Available
N.E.C. - Not Elsewhere Classified

Source: U.S. Bureau of the Census

NUMBER OF EMPLOYEES: 8-STATE SOUTHEAST[1/]
(thousands)

Standard Industrial Classification		1963	1967	1972	1976
2300 to 2389	Apparel	261.1	322.0	358.0	376.1
2310			18.0*	22.7*	9.0
2311	Men's and Boys' Suits and Coats		18.0*	22.7*	9.0
2320		142.8	172.2	175.2	176.0
2321	Men's and Boys' Shirts and Nightwear	63.6	68.3	67.3	65.7
2322	Men's and Boys' Underwear	4.4	8.2*	11.0*	
2323	Men's and Boys' Neckwear	.4	.5	1.2*	
2327	Men's and Boys' Separate Trousers	32.8	41.2*	39.4*	24.2
2328	Men's and Boys' Work Clothing	29.0	41.0*	46.4*	43.0
2329	Men's and Boys' Clothing, N.E.C.	.6	13.1*	10.1*	
2330		42.3	56.0	74.6	94.4
2331	Women's and Misses' Blouses and Waists	11.6	14.3*	14.7*	9.3
2335	Women's and Misses' Dresses	14.2	24.7*	31.2*	35.0
2337	Women's and Misses' Suits and Coats	1.0	3.3*	6.8*	
2339	Women's and Misses' Outerwear, N.E.C.	8.3	13.7	21.9*	18.6
2340		27.6	37.3*	45.1*	30.2
2341	Women's and Children's Underwear	5.2	28.8*	36.4*	7.0
2342	Brassieres and Allied Garments	3.6	8.3*	8.8*	2.6
2350		.2	1.2*	.7*	
2351	Millinery				
2352	Hats and Caps, Except Millinery		.9*	.7*	
2360		9.7	20.8*	24.6*	15.3
2361	Children's Dresses and Blouses	4.2	6.3*	10.7*	
2363	Children's Coats and Suits	1.1	2.0*	1.9*	
2369	Children's Outerwear, N.E.C.	8.4	12.3*	12.6*	
2370				.3*	
2371	Fur Goods			.3*	
2380		9.2	15.6*	13.5*	3.3
2381	Fabric Dress and Work Gloves	2.5	6.4*	6.1*	
2384	Robes and Dressing Gowns	1.4	3.2*	2.3*	
2385	Waterproof Outer Garments	1.8	4.5*	2.8*	
2386	Leather and Sheep Lined Clothing		.2*	.4*	
2387	Apparel Belts	1.8	.7*	.6*	
2389	Apparel and Accessories, N.E.C.		.6*	.8*	

1/Includes: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

N.E.C. - Not Elsewhere Classified
* - Estimated by Georgia Tech

Note: Columns do not always add due to rounding

Source: U.S. Bureau of the Census

VALUE OF SHIPMENTS: 8-STATE SOUTHEAST[1/]
(millions of dollars)

Standard Industrial Classification		1963	1967	1972	1976
2300 to 2389	Apparel	NA	3375.4	5182·0	7394.3
2310		87.6	167.8+	137.8+	159.6
2311	Men's and Boys' Suits and Coats	87.6	167.8+	137.8+	159.6
2320				2739.4	3838.9
2321	Men's and Boys' Shirts and Nightwear	520.1	676.6	1068.2	1455.5
2322	Men's and Boys' Underwear	46.6	42.9+	70.8+	
2323	Men's and Boys' Neckwear	2.5	3.4	9.2+	
2327	Men's and Boys' Separate Trousers	301.4	400.2+	416.1+	412.1
2328	Men's and Boys' Work Clothing	348.7	497.1+	727.6+	1109.6
2329	Men's and Boys' Clothing,N.E.C.	4.0	32.1+	26.1+	
2330				936.5	1514.2
2331	Women's and Misses' Blouses and Waists	61.2	67.1+	155.7	177.7
2335	Women's and Misses' Dresses	93.6	164.3+	296.4+	423.7
2337	Women's and Misses' Suits and Coats	5.4	16.2+	31.0+	
2339	Women's and Misses' Outerwear, N.E.C.	76.9	169.8	232.0+	358.7
2340				551.5+	570.3
2341	Women's and Children's Underwear	37.0	52.8+	131.2+	95.7
2342	Brassieres and Allied Garments	59.5	81.3+	105.3+	111.0
2350				6.2+	
2351	Millinery				
2352	Hats and Caps, Except Millinery		+	+	
2360				203.1+	271.7
2361	Children's Dresses and Blouses	32.0	42.4+	+	
2363	Children's Coats and Suits	19.5	8.5+	+	
2369	Children's Outerwear, N.E.C.	52.6	69.9+	68.3+	
2370				+	
2371	Fur Goods			+	
2380				163.7+	82.9
2381	Fabric Dress and Work Gloves	11.4	33.1+	40.5+	
2384	Robes and Dressing Gowns	8.4	20.3+	19.0+	
2385	Waterproof Outer Garments	10.9	26.7+	12.4+	
2386	Leather and Sheep Lined Clothing	4.9	+	+	
2387	Apparel Belts		+	3.7+	
2389	Apparel and Accessories, N.E.C.		+	+	

1/Includes: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

NA - Not Available
N.E.C. - Not Elsewhere Classified
+ - Additional value is known but not stated

Source: U.S. Bureau of the Census

Appendix B

LOCAL SOURCES OF TECHNICAL ASSISTANCE FOR PRODUCTIVITY IMPROVEMENT

EDA UNIVERSITY CENTERS

ALABAMA

Dr. Achilles A. Armenakis
Director
Technical Assistance Center
Auburn University
2232 Haley Center
Auburn, Alabama 36830

FLORIDA

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Appendix C

A REGIONAL MODEL FOR A PRODUCTIVITY OVERSIGHT PROGRAM FOR THE APPAREL INDUSTRY

Purpose

The basic purpose of the proposed productivity oversight program is to help the apparel industry in dealing with unique regional productivity problems. The proposed program envisions the establishment of regional councils with supporting centers to study regional productivity problems, to recommend necessary improvements, and to foster the implementation of productivity improvement programs.

Nature of the Universe

The U. S. apparel industry is extremely fragmented and cannot be approached on a uniform basis. Local manufacturers face their own peculiar mix, relationships with textile firms, labor availability, and costs. The industrial processes of the apparel industry involve many kinds of organizations--manufacturing firms, governmental agencies, labor and trade associations, and special interest groups such as universities, private consultants, and environmentalists. The industrial process involves interaction between and among these organizations. Generally, action that exploits sets of arrangements among these organizations is needed so that workers can have jobs and earn incomes, business can make a profit, governments can have a sound economic base on which taxes can be collected to pay for governmental operations and services, and special interest groups can have their interests served.

At this time, it appears that the apparel industry can be characterized in the following terms:

- The apparel industry is extremely fragmented and highly competitive;
- The apparel industry is a labor-intensive industry in which productivity measurement has for the most part been concerned with measurement in terms of labor utilization;

- o The industry continues to face economic conditions that result in unprofitable operations for many individual firms;
- o The industry employs a large number of minority workers and women;
- o Individual firms continue to seek survival on a profitable basis while maintaining organizational integrity, autonomy, and the protection of proprietary interests;
- o The apparel industry provides commodities that are a major component of consumer expenditures, and thus the price/cost developments of the industry have a direct impact on consumers; and
- o Further governmental intervention appears likely in an effort to stimulate revival of the industry.

Program Concept and Objectives

The concept for the development and establishment of a regional apparel industry productivity oversight program is one that provides for the sharing of knowledge and resources in a way that is useful and profitable to all organizations involved, yet maintains organizational autonomy and proprietary integrity. The concept as formalized in the model envisions exchanges carried out by program participants on a voluntary basis, on neutral ground, in a nonthreatening environment. Thus for the purposes of model building, a networking concept is utilized.

In the context of interorganizational relations, an organizational network may be defined as an arrangement of people, organizations, and procedures needed for networking to occur. The term "organizational networking" is used to describe the conscious and systematic interaction among separate organizations needed to achieve some agreed-upon purpose. Organizational networks provide tracks, paths, or channels by which organizations can intercommunicate or make exchanges in a conscious, rational, and systematic fashion.

Organizational networking between and among separate autonomous organizations is conducted without any "authoritative" force of one agency. Rather, the most effective and efficient networking occurs when autonomous organizations participate in an exchange to achieve, as indicated in the definition above, some mutually agreed-upon purpose on a voluntary basis, on neutral

ground, in a nonthreatening environment. Effective use of such networks demand that they be energized and maintained on a continuing basis.

In developing and using organizational networks, it is recognized that organizations relate to each other much as people relate to one another. They communicate thoughts, they exchange information and resources, they attempt to lead or control, and they do it in behalf of the organization. When this happens, rules that govern organizational behavior, rather than rules that govern individual behavior, apply.

The objective of a network for improvement of productivity of the apparel industry in the region is to provide an efficient and effective organizational process for the development, coordination, and management of strategies relating to improved productivity which:

- o Can function among diverse, fragmented industrial concerns, labor and trade associations, government agencies, and special interest groups;
- o Will provide for optimum cooperative interaction among participants involved in the process;
- o Will stimulate appropriate action that relates to economic and social gain for those involved in the process through productivity improvement;
- o Will install and encourage basic values and citizen attitudes towards productivity utilization in an effective and efficient way;
- o Will play a role in disseminating and promoting productivity concepts, techniques, and action results in the region; and
- o Will maintain regional relationships with broader U. S. apparel productivity initiatives.

Scope of Program

Although the scope of the proposed program cannot be precisely forecast, it is envisioned that it will include, but not be limited to, the following areas of concern:

- Situational Analysis

  Continuing assessment of industry productivity
  Identification of threats to industry stability
  Contingency planning to meet identified threats

- Management Productivity

  Entrepreneurial investment
  Operating capital
  Management functions, including marketing

- Manufacturing Technology

  Optimum mix and use of machinery and labor

- Labor Productivity

  Efficient and effective utilization of the labor force
  Maintaining American standards of the quality of working life

- Productivity Measurements

- Technology Transfer

  Studies and recommendations relative to optimum means of furnishing management and technical assistance support to the industry through one or more lead assistance centers.

Model Characteristics

Model building is an art, not a science; it is also an experimental process. The main purpose in designing the model is to develop and use meaningful relationships among elements of the universe under consideration. The use of the model approach in designing a mechanism to focus on improvements in the apparel industry is based on the fact that a set of relationships can be developed which will logically represent the several problems faced by the industry and furnish a systematic approach for problem solution. The primary use of the model approach is to furnish a simplified structure that organizes thinking and guides action.

The purpose of the "regional model" is to provide a conceptual process through which individuals involved in the apparel industry who are interested in the stability, profitability, and quality of working life of the industry can be brought together with available resources that can be focused on the development and implementation of industry-wide strategies that will make the regional apparel industry more competitive in the national and world markets.

Model Structure

The model structure proposed for the productivity oversight program consists of a Regional Apparel Industry Productivity Council and a Regional Apparel Industry Productivity Center. The Council is primarily a policy body; the Center furnishes staff support to the Council and support in program implementation. The basic model for the Council is illustrated in Figure 1. Figure 2 illustrates a broad model approach for the program.

The model is concerned primarily with the organizations shown in Figure 2 and with their relationships with one another and with the overall environment. The model has been developed to organize thinking and to guide action. Real-world organizational structure, programs, and operating procedures should be developed jointly by program participants. As illustrated in Figure 2, a wide array of organizations should be "networked" into a regional productivity program. Major organizations to be included in the program are as follows:

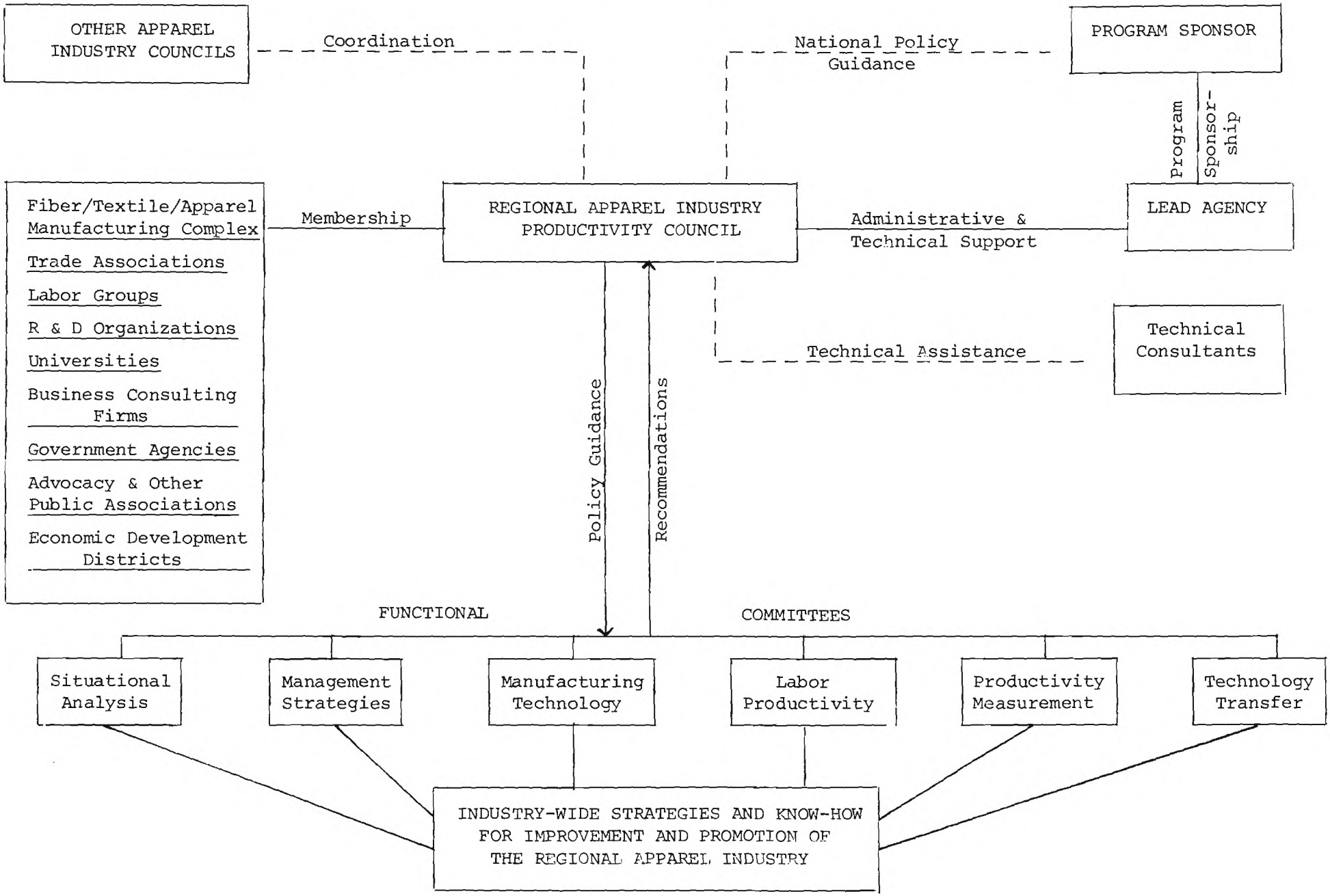
Program Sponsor. The program is designed for initial funding by the sponsor through a lead agency with an overall goal of providing national guidance to organizations and agencies that desire to become associated with the program. It is envisioned that the program will move towards a self-supporting status after a period of two or three years.

Lead Agency. The lead agency should administer the program approved by the sponsor. As the program develops, the lead agency will shift policy guidance to the Productivity Council and the work performance of the program to the associated Center.

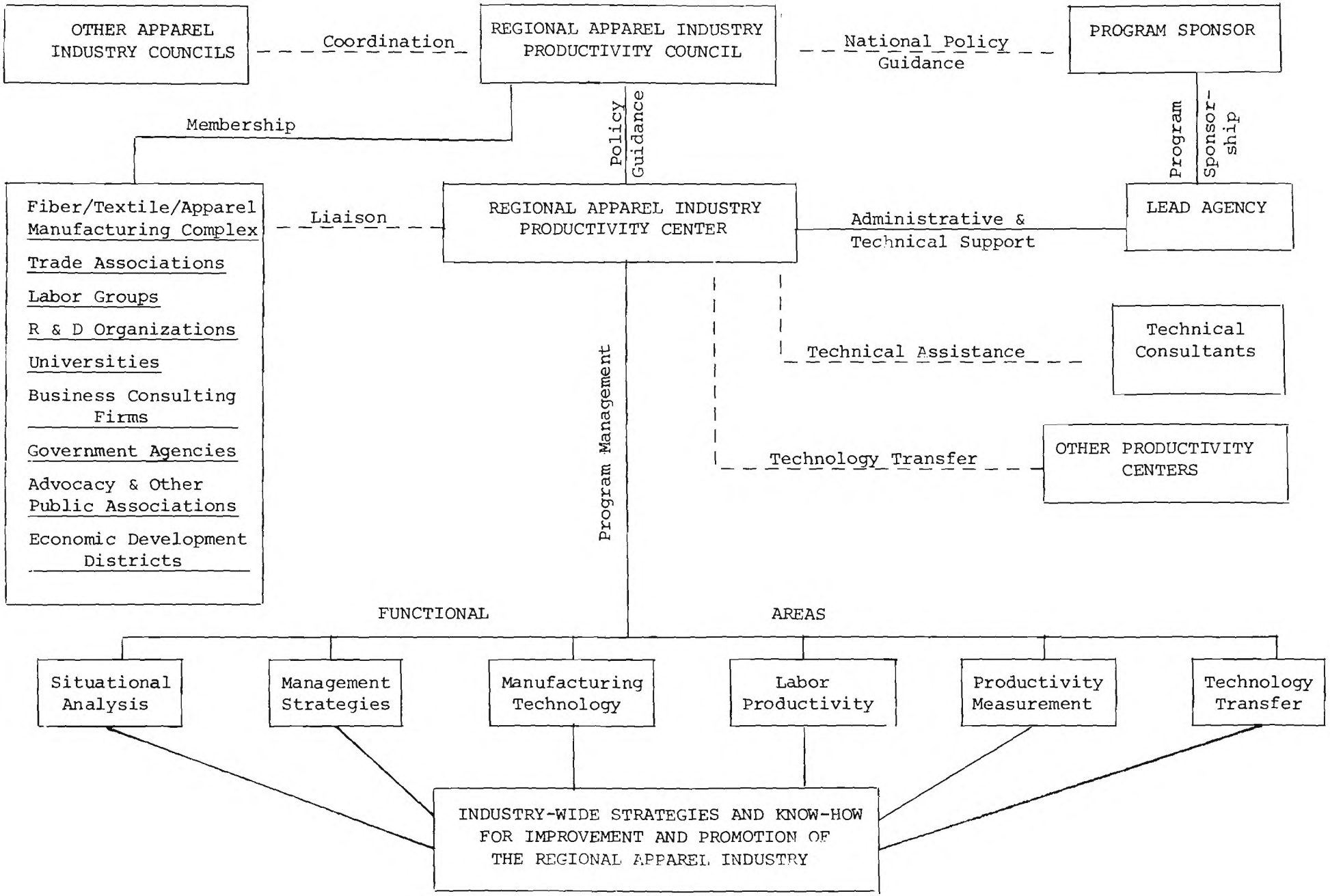
Productivity Council. The Regional Apparel Industry Productivity Council is designed to furnish policy direction for the development and implementation of a productivity oversight program for the apparel industry. Its membership and organizational interrelationships are illustrated in Figure 1. Its tentative purposes are described in a following section.

Productivity Center. The Regional Apparel Industry Productivity Center is designed to furnish continuing staff support to the Productivity Council and to implement programs approved and supported by the Council. The Center's

A PRODUCTIVITY OVERSIGHT PROGRAM FOR THE APPAREL INDUSTRY:
A REGIONAL MODEL



A REGIONAL MODEL



organizational location in the productivity program is shown in Figure 2; its purposes, organization, and organizational relationships are described in the following sections.

Organizational Format for the Productivity Council

Organizational Purposes. The organizational purposes of the Regional Apparel Industry Productivity Council are to bring together individuals from the apparel industry, labor and trade associations, governments and their agencies, research and development agencies, organizations involved in technology transfer, and business consulting and other private and public institutions to:

- o Work together in maintaining and improving the stability, profitability, and quality of working life of the regional apparel industry;
- o Maintain oversight of the apparel industry with respect to productivity improvement on an industry-wide basis;
- o Draw together available resources that can be focused on productivity improvement programs;
- o Stimulate appropriate action that relates to economic and social gain for those involved in the regional apparel industry through productivity improvement; and
- o Maintain regional relationships with broader U. S. apparel industry productivity initiatives.

Organizational Membership. The concept for the development and establishment of the Regional Apparel Industry Productivity Council is one that provides for the sharing of knowledge and resources in a way that is useful and profitable for all organizations involved, yet maintains organizational autonomy and proprietary integrity. The concept as formalized in this format envisions exchanges carried out by organizational members on a voluntary basis, on neutral ground, in a nonthreatening environment.

Individuals who express interest in the purposes of the Council and who qualify under membership provisions will be eligible for membership in the Council. Membership is classified as follows:

- o Institutional Membership. Institutional membership is open to any type organization listed in Figure 2 which supports the purposes of the Council stated above. Institutional members are voting members of the Council. Each voting member corporation or organization will appoint and certify to the Executive Secretary a person to be its representative in the Council who will represent, vote, and act for the member in all affairs of the Council.
- o Associate Members. Associate members are employees of a voting member. Such associate members will have no right to vote.
- o Affiliate Members. Affiliate members will consits of individuals or organizations that are interested in the goals of the Council, but that do not desire Institutional Membership. Such affiliate members will have no right to vote.

Organizational Structure. The organizational elements of the Council will be as follows:

Institutional Membership
Board of Directors
Officers
Committees

- o Institutional Membership. The institutional membership will meet from time to time to elect members of the Board of Directors and to take such actions as may be required by the Council's constitution and by-laws.
- o Board of Directors. The Board of Directors will consist of a designated number of institutional members elected for two-year terms in the manner prescribed in the by-laws, together with the duly elected officers of the Council and the Executive Secretary, who may be elected outside the Board's elected membership and who will serve on the Board with vote. To qualify for election to the Board of Directors, an individual must be a voting member in good standing of the Council. No member of the Board of Directors will serve more than two full consecutive terms as a member

of the Board. All business of the Board will require a quorum, which will consist of a majority of its members. Without limiting its powers, the Board will act as follows:

a. Direct the affairs of the Council, either itself or through its officers, committees, or other representatives.
b. Control the care, appropriation, and expenditure of all funds of the Council.
c. Elect the officers.
d. Establish the salaries of the Executive Secretary and the office staff.
e. Rule whenever necessary on the eligibility and classification of candidates for membership.
f. Delegate duties to the Executive Committee, which acts in its behalf between Board meetings.

- Officers. The officers of the Council will be a President, a First Vice President, a Second Vice President, a Treasurer, and an Executive Secretary. Each officer will have the usual powers and duties as are provided in the by-laws. Officers will be elected by the Board of Directors for a term of one year, and no officers except the Executive Secretary will be eligible for reelection to the same office for a full consecutive term.

- Committees. The Council will have an Executive Committee and such other committees as may be deemed necessary by the Board of Directors in accordance with the Council's constitution and by-laws. Functional committees could be established in the following areas:

Situational analysis
Management strategies
Manufacturing technology
Labor productivity
Productivity measurement
Technology transfer--consulting, training, education

Organizational Format for the Productivity Center

The purpose of the Center is to furnish a staff supporting mechanism for the Productivity Council so that the Council can have access to necessary data, information, and investigative services needed to support the purposes of the Council. Also it is envisioned that the Center can assist the Council in the development and implementation of industry-wide productivity programs.

Organizational Structure. It is envisioned that the staff for the Productivity Center will be a small one utilizing outside technical assistance to conduct investigative work and to assist in the implementation of approved programs. Essentially, the Center staff will conduct "oversight" activities in six functional areas in cooperation with the several Council committees. These functions are described as follows:

o Situational Analysis. The situational analysis area is concerned with continuing surveillance of the apparel industry, seeking to identify and characterize opportunities for productivity improvement in the industry. A collateral purpose is to identify threats to the industry and to recommend approaches to strengthening the industry on a regional basis.

o Management Strategies. The management functional area is concerned primarily with identifying business and management strategies that will enable the apparel industry in the Southeast to compete more effectively in the world market. Its functions will include the survey of current domestic corporate strategies, strategies of foreign competitors as they relate to management practices, and the application of relevant and improved strategies to apparel firms in the Southeast on an industry-wide basis.

o Manufacturing Technology. The manufacturing technology functional area is concerned primarily with the efficient, effective, and economic application and mix of machinery and labor in the manufacturing process. While its activities are closely related to the labor productivity functional areas, its operations are not necessarily constrained by labor factors in the industrial process.

o Labor Productivity. The labor productivity functional area has its focus on the efficient and effective utilization of the labor force while

maintaining American standards of the quality of working life. While attempting to furnish approaches that will optimize the utilization of labor, this functional area seeks to install and encourage the basic values and citizen attitudes towards productivity utilization in an effective and efficient way so that there is economic and social gain for those involved in the apparel industry process. Additionally, this functional group is expected to join with the manufacturing productivity groups to play a role in disseminating and promoting productivity concepts, techniques, and action results in the Southeast.

o Productivity Measurement. The productivity measurement functional area will conduct studies relevant to developing more effective processes for measuring productivity gains and/or losses. Such productivity measurement techniques are needed so that economic and social gains can be forecast and measured in a manner that will reflect the overall gain or loss of the industry with respect to capital investment, as well as labor and machinery, productivity. The productivity measurement functional group will also analyze and evaluate innovations introduced into the industry by other elements of the Center through productivity measurement.

o Technology Transfer. The technology transfer functional area provides the primary outreach function for the Center and feedback mechanism. This group will insure the transfer of appropriate technology on an industry-wide basis and determine the impacts of such transfer efforts.

Organizational Relationships. The array of organizations set forth in Figure 2 illustrates the need for systematic interaction among these separate, autonomous organizations if the purposes of the Council are to be achieved. It must be recognized that organizational relationships will be conducted without the application of any "authoritative" force of any one agency or organization. Rather, it will be essential that Council membership participate in an exchange to achieve mutually agreed-upon Council purposes and specific programs on a voluntary basis, on neutral ground, in a nonthreatening environment.

The maintenance of adequate and appropriate organizational relationships will provide ways and means for leaders from the apparel industry, labor and trade associations, governmental agencies, management and technical consulting

organizations, and others to work together so that each organization can be a part of the process for revitalizing the apparel industry, yet achieve its own organizational goals and maintain its organizational and proprietary integrity.

Work Plan for Model Implementation

This preliminary work plan has been designed to assist in the implementation of the model. The plan envisions three phases of development and implementation covering a three-year period. The phases are as follows:

Phase I - Program Start-up, First Year Operations. This phase is primarily concerned with the first stage of a comprehensive plan for the improvement of the southeastern apparel industry. Major elements of the Phase I plan are as follows; the lead agency will:

- o In coordination with the program sponsor establish an ad hoc advisory group of individuals associated with the apparel industry in the region who will furnish advice and assistance in the development of:
  - Tentative overall productivity program goals,
  - Initial policy priorities,
  - Initial program activities, and
  - Strategy for full implementation of a productivity program of the apparel industry in the region.
- o With the advice and assistance of the ad hoc advisory group, formalize a regional Apparel Industry Productivity Advisory Committee with a broad membership base representing industry interests in the region.
- o Initiate the organizational networking process.
- o Establish the Regional Apparel Industry Productivity Center.
- o In cooperation with the Advisory Committee, conduct conferences with persons interested in the welfare of the regional apparel industry to determine the feasibility of further institutionalizing the affairs of the Advisory Committee.
- o Conduct organizational meetings of the Council and establish the Council as a legal entity with an elected board of directors and appropriate officers.

- o Conduct investigations in the several committee areas of interest in matters relating to industry-wide strategies and know-how for productivity improvement and promotion in the regional apparel industry.
- o Place the Productivity Center in a fully operational mode.
- o Conduct an evaluation of first year operations. Should the evaluation indicate the feasibility of continuing the program, make appropriate recommendation to the sponsor concerning Phase II operations.

Phase II - Full Test and Evaluation, Second Year. Assuming that the first year demonstration shows that the program is a viable approach to productivity improvement in the apparel industry, a second year program will be undertaken under the auspices and funded by the sponsor during the second year. During this period, an effort should be made to:

- o Further institutionalize the regional Apparel Industry Productivity Council and its operations by expanding the membership base and scope of programs.
- o Strengthen the role of the Council's relationship with all parties involved in and with the apparel industry.
- o Develop ways and means for providing financial support for the Council with the minimum use of federal funds.
- o Prepare the Council staff and membership for future operations to be dependent of support and guidance by any federal agency.
- o Further institutionalize and expand programs of the Productivity Center; place Center on self-sustaining basis.

Phase III - Operation of the Council on a Self-sustaining Basis. In the third and subsequent years, it is anticipated that the Council will be operated and funded by its membership to the maximum extent possible. It should be fully responsible to its membership and duly elected officers. It should provide an organization that will carry out the mandate of its membership in such a manner that individual members can have their needs met, yet permit each member to retain its full autonomy and proprietary interests.